

Metal Trades Department Annual Education Conference

“The Nuclear Power Partnership: *Building on Past Success for the Challenge of Tomorrow*”

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Thank you. It's a special pleasure to meet with you during your Annual Education Conference. I hope that the information I want to share with you today, can stimulate further discussions as you evaluate and consider your union's strategic long-term education efforts.

For fifty years, the government and the nuclear industry have made commercial nuclear power a reliable, economic and environmentally friendly energy source. That could not have been accomplished without the hard work of your predecessors, the AFL-CIO Metal Trades Department, Building Trades Department, and other trade unions.

Last May, I had the opportunity to hear your president, Ronald Ault, speak at the annual conference of the Nuclear Energy Institute. He reminded the audience that the Metal Trades Department has been working with nuclear energy since the atom was first harnessed more than half a century ago, achieving a magnificent record in the manufacturing, construction and operation of 130 nuclear plants.

You have been an important partner – with government, industry and the scientific community – in a major national success: developing an American energy resource that is now producing 20 percent of the nation's electricity. 103 operating nuclear power plants in 31 states are generating base-load electricity – 24 hours per day, 7 days a week.

Today, we have another great new opportunity to work together. It's been over 30 years since the last nuclear power plants were ordered. I can confidently tell you today, that we are about to end that hiatus and begin the building of America's next generation of nuclear power plants.

I am confident because of the determined actions our government is taking to facilitate this growth...and confident because America's generating companies and nuclear industry are already actively planning for as many as 30 new nuclear projects. And once again, the Building trades, the Metal Trades, and others will play a crucial role in this vast new effort.

So today I'd like to describe this new opportunity and what has brought it about and how we can work together to ensure its success. Specifically, I want to emphasize three points:

- The United States – like much of the world – needs substantially more electric power to run its economy in the decades ahead.
- Nuclear power must play a major role in meeting this growing demand, and preparations for expanding that role have already begun.
- New nuclear construction will require a substantial increase in a highly skilled and diverse workforce for manufacturing, construction and other skilled, high-paying jobs.

That sounds to me like a great opportunity to renew and expand the vital partnership between the Metal Trades Department, its affiliates, the government and the nuclear industry.

This is a vital partnership because it must address and resolve some of the most pressing issues of our age, and energy issues are among the most important ones.

Fierce global competition for energy resources is now an uncomfortable fact of life. Prices skyrocket; supplies are often in question and sometimes interrupted.

At the same time, the world's use of electric power is increasing at an astonishing rate. The main reason, of course, is the rapid increase in electricity demand as the economic growth of developing countries like China and India expand.

The Department of Energy predicts that over the next 24 years, worldwide electric generating capacity will have to be increased by more than 70 percent.

Here in the United States, we forecast that our use of electric power will increase by 50 percent by 2030. This means that we will need to add 285,000 megawatts of new base load capacity.

- That's the equivalent of 285 one thousand megawatt power plants.
- That's roughly the total capacity of all the coal-burning power plants now operating throughout the nation.
- It's almost three times the capacity of our existing 103 nuclear power plants.

While electricity is environmentally clean, some of the fuels used to generate the electricity are not. So as we plan and build new generating capacity, we have to consider their impact.

Even as the United States and other developed countries are working to stabilize and cut back on our air pollution and emissions, other countries are steadily expanding their burning of carbon-based fuels such as coal, oil and natural gas. While we must continue to use these carbon-based fuels, enormous efforts are underway to develop new clean burning technologies and to reduce their emissions and environmental impact.

In this respect, nuclear power provides a unique advantage—it does not generate air pollutants or greenhouse gases.

Recognizing these energy and environmental needs, our government has placed a high priority on encouraging a new generation of nuclear plants for the near term, and on developing advanced technologies to ensure that we secure the benefits of nuclear power over the long term.

These high priorities are clearly stated in the Energy Policy Act of 2005. The President and Congress worked together on passing and implementing this landmark legislation. Along with other provisions, this legislation offers incentives to companies that construct the first new nuclear plants. With billions of dollars at stake, these incentives will reduce the financial and regulatory uncertainties and risks that in the past blocked the way forward.

These incentives are producing results. Numerous companies have announced that they are exploring and planning more than 30 new nuclear plants. Construction of these plants could begin in the next 10 years. The line-up of potential licensing applicants is forming so quickly that the Nuclear Regulatory Commission expressed concern about its ability to process all the applications it expects.

While I say these are potential applicants, some have already placed orders for procurement of long-lead time components – the heavy forgings. One group of companies recently announced that it is moving to re-establish a heavy component manufacturing base in the United States. And other companies throughout the industry are jockeying for their position to catch the new wave of nuclear power developments.

I believe we will see our first firm commitments to license new nuclear plants next year.

Nuclear power currently provides about 20 percent of America's electric power. If we do indeed add 285,000 megawatts of new capacity by 2030, we would need to add 40-45 new nuclear power plants just to maintain the 20 percent nuclear share.

And even more nuclear plants will be needed if other energy sources like natural gas -- which faces rising costs and stiff competition for use in home heating and industry -- cannot sustain the 50 percent growth needed over the next two decades to maintain their 20 percent share of electricity supply.

Why is nuclear so important? There are three compelling reasons:

First, we need these new nuclear power plants because they do not emit any air pollution or greenhouse gases that contribute to global climate change.

Second, because nuclear power, like coal, is our best and most reliable domestic base load energy resource.

Third, because it is economic and affordable. While it may cost more to build a nuclear power plant, it is cheaper to operate and isn't subject to fuel supply interruptions or huge price jumps for fuel costs.

There is another great benefit to this next generation of nuclear energy plants. They will help to fuel our competitive economy and create new jobs for a wide range of skilled and highly paid workers.

And this expanded employment will also require substantial increases in education and training.

Let me give you an idea of the scale of the direct job creation we are talking about.

A DOE report about a year ago looked at the infrastructure requirements of the very first wave of new nuclear plant construction in the United States. It analyzed the workforce needs of just eight new nuclear projects, beginning construction in 2010. It found that the direct new jobs would include:

- 1,350 pipefitters
- 1,450 electricians and I&C technicians
- 400 construction supervisors
- 500 construction engineers and schedulers
- 300 boilermakers
- 1,250 sheet metal workers
- 1,450 iron workers

Those are just the direct jobs required to build the first eight units.

The Idaho National Laboratory recently looked at the workforce requirements of the full fleet that electric companies are considering today. Specifically, it examined the needs of a fleet of 33 to 41 new third generation nuclear units, providing 50,000 megawatts of new capacity – which, remember, is less than the new capacity we need by 2030.

It found that this nuclear fleet would result in:

- 72,000 to 79,000 plant construction and operations jobs
- The repatriation of 37,000 to 38,000 nuclear manufacturing jobs
- Another 181,000 to 250,000 indirect jobs in the nuclear power industry
- And an additional 218,000 to 242,000 indirect jobs in non-nuclear industries throughout the country.

Altogether, then, this fleet of new nuclear plants would create as many as 610,000 new jobs in the United States...in addition to providing reliable, clean, safe, emissions-free electric power.

So the benefits of nuclear power are dramatic – for the global environment, for the nation’s economy, and for the employment of hundreds of thousands of workers. In addition, its benefits are unique.

While the focus of my remarks today is on the expanded use of nuclear power, we cannot forget the growing potential of other renewable energy resources such as wind and solar power. And we can be encouraged by the strategic government and industry efforts to develop new technologies for the clean use of carbon-based fuels such as coal.

At the Department of Energy, we are working aggressively on a wide range of energy sources and energy technologies to help meet the great energy and environmental challenge that lies ahead. That includes developing clean coal and the transition to hydrogen fuels for transportation. But the fact remains that there is no practical, proven way we can meet our future electric power needs unless we increase our fleet of base load nuclear power stations.

I think all this shows that the challenge to the nuclear partnership – government, industry, scientists, unions like yours – is a formidable one.

The President recognizes that nuclear power is important not just for the next few decades, but for the long-term future, both in the United States and in other countries throughout the world.

As a result, earlier this year, he launched a major new initiative called the Global Nuclear Energy Partnership -- GNEP. This is a comprehensive approach to increasing global energy security, through expanding nuclear power internationally while reducing the risk of nuclear proliferation.

To support expanded use of nuclear energy, we are moving toward the recycling of used nuclear fuels. New recycling facilities are being designed to recover unused materials in fuel for reuse and to build a new Advanced Burner Reactor to consume and reduce the amount of waste that requires emplacement in a repository, while generating electric power.

Yucca Mountain is a very important part of this strategy and we must continue working to open Yucca Mountain in the next decade. But with recycling we may be able

to more efficiently utilize Yucca Mountain to meet the needs of the nation through this century.

We are excited about the potential of GNEP. In addition to making nuclear power available to many other countries, nuclear energy can allow countries to cut back on their burning of fossil fuels. This will help the United States by reducing our dependence on foreign energy sources, extending our fuel supply, and by reducing the amount of space that will be required for the disposal of radioactive waste.

These GNEP goals and efforts can help assure that nuclear power will be able to provide a growing share of the world's electricity for the long-term, and help to reduce the potential impacts of global climate change.

Can we do better? I think so. It will take a more concerted, intensified effort in power plant design . . . siting and licensing . . . financing . . . construction and operation . . . attracting new workers into the trades and technical fields that nuclear plants require . . . continued low interest rates so important for building base load electricity... and continually convincing decision-makers and the public that nuclear power is one of our most important lifelines for the future . . . and that Americans support it.

America's labor unions have always played a vital role in the job of meeting our nation's energy needs.

Once again, you are challenged to play a vital role in building the next generation of America's nuclear power plants and the expansion of America's nuclear industry.

I can't say it better than your President Ron Ault did last May when he addressed a meeting of nuclear industry leaders. He told them,

“ We want you to succeed because it will be good for America's union members. More importantly, a source for safe, reliable, clean and less expensive energy will make our nation stronger. We will be proud to help you develop that capacity and produce that energy.”

While there is growing support for the use of nuclear energy, the benefits of nuclear energy need to be recognized on both sides of the political aisle and historically, that has not always been the case. There is now a growing recognition of the importance of nuclear energy, especially for environmental reasons and for energy security, too.

The assistance of your membership is needed to increase public awareness that *energy security* is essential to *national security* and that a key ingredient to *energy security* is *nuclear energy*. Our country's energy security should not be sacrificed in the national political debate.

Let's work together to stimulate support for efforts to secure our energy future. We need your support to make sure that nuclear energy enjoys support by both the

Democratic Party and the Republican Party – not as a partisan issue but an issue of national importance where we stand together.

We look forward to that partnership and to working with you as we transform our nuclear expectations into reality.

Thank you.